

DATE: February 1, 2016

SUBJECT: Menu Planning Guidelines

TO: AAA Executive Directors and Nutrition Directors

FROM: Nicole Keeney, Program Coordinator

PURPOSE: To provide menu planning guidelines that comply with the Dietary Reference Intakes and the most recent version of the Dietary Guidelines for Americans.

LEGISLATIVE

REFERENCE: Older Americans' Act of 1965, as amended, Sec 339

BACKGROUND: The Virginia Department for Aging and Rehabilitative Services-Virginia Division for the Aging (DARS-VDA) establishes menu planning guidelines to aid program providers in the provision of safe and nutritious meals that meet the requirements of the Older Americans Act.

TIMELINE FOR IMPLEMENTATION:

The Liquid Nutrition Supplements section will be implemented by February 1, 2016.

SPECIAL INSTRUCTIONS:

The VDA Menu Planning Guidelines will be used for the planning and procuring of meals. They will be followed in all meals funded with Older Americans Act Title III and Nutrition Services Incentive Program (NSIP) funds, State funds, and program income.

CONTENT: DARS-VDA Menu Planning Guidelines

MENU PLANNING GUIDELINES

Purpose

Menu Planning Guidelines are developed to sustain and improve client health through the provision of safe and nutritious meals using specific guidelines. These guidelines shall be incorporated into all requests for proposals/bids, contracts, and open solicitations for meals.

Authorizing Documentation

The Older Americans Act of 1965, SEC. 339 as revised in 2006, requires that meals

1. comply with the most recent ***Dietary Guidelines for Americans***, published by the Secretary of Health and Human Services (HHS) and the Secretary of Agriculture, and,
2. provide to each participating older individual:
 - a. a minimum of 33 1/3 percent of the ***dietary reference intakes*** as established by the Food and Nutrition Board of the Institute of Medicine of the National Academy of Sciences, if the project provides one meal per day,
 - b. a minimum of 66 2/3 percent of the allowances if the project provides 2 meals per day,
 - c. 100 percent of the allowances if the project provides 3 meals per day, and
3. to the maximum extent practicable, are adjusted to meet any special dietary needs of program participants.

The Older Americans Act requires Older Adult Nutrition Programs to comply with the current Dietary Guidelines for Americans (DGAs). The DGAs translate the nutrient based recommendations from the dietary reference intakes (DRIs) into food, diet, and physical activity recommendations. The DRIs are considered the latest scientific nutrient reference values.

Dietary Reference Intakes

The Food and Nutrition Board of the National Academy of Sciences, beginning in the early 1990s, undertook the task of revising the RDAs, and new nutrient reference values were developed called the Dietary Reference Intakes (DRIs). There are four types of DRI values: the Estimated Average Requirement (EAR), the Recommended Dietary Allowance (RDA), the Adequate Intake (AI), and the Tolerable Upper Intake Level (UL), *see definitions*. The primary goal of having new dietary reference values was not only to prevent nutrient deficiencies but also to reduce the risk of chronic diseases such as osteoporosis, cancer, and cardiovascular disease. The development of the new federal guidelines impacts the standards to which the Older Adult Nutrition Program (OANP) is being held.

DRI Definitions

- Recommended Dietary Allowance (RDA): the average daily dietary intake level that is sufficient to meet the nutrient requirement of nearly all (97 to 98 percent) healthy individuals in a particular life stage and gender group.
- Adequate Intake (AI): a recommended intake value based on observed or experimentally determined approximations or estimates of nutrient intake by a group (or groups) of healthy people that are assumed to be adequate - used when an RDA cannot be determined.
- Tolerable Upper Intake Level (UL): the highest level of daily nutrient intake that is likely to pose no risk of adverse health effects for almost all individuals in the general population. As intake increases above the UL, the potential risk of adverse affects increases.
- Estimated Average Requirement (EAR): a daily nutrient intake value that is estimated to meet the requirement of half of the healthy individuals in a life stage and gender group - used to assess dietary adequacy and as the basis for the RDA.

Dietary Guidelines for Americans

The Dietary Guidelines for Americans (DGAs) provide science-based advice to promote health and to reduce risk for major chronic diseases through diet and physical activity. The information in the Dietary Guidelines is used in developing Federal food, nutrition, and health policies and programs. It also is the basis for Federal nutrition education materials designed for the public and for the nutrition education components of HHS and USDA food programs.

The 2015-2020 Dietary Guidelines provide five overarching guidelines that encourage healthy eating patterns, recognize that individuals will need to make shifts in their food and beverage choices to achieve a healthy pattern, and acknowledge that all segments of our society have a role to play in supporting healthy choices.

- Follow a healthy eating pattern across the lifespan.
- Focus on variety, nutrient-dense foods, and amount.
- Limit calories from added sugars and saturated fats, and reduce sodium intake.
- Shift to healthier food and beverage choices.
- Support healthy eating patterns for all.

Key Recommendations provide further guidance on how individuals can follow the five Guidelines. The Dietary Guidelines for Americans 2015-2020 Key Recommendations are as follows:

Consume a healthy eating pattern that accounts for all foods and beverages within an appropriate calorie level.

A healthy eating pattern includes:

- A variety of vegetables from all of the subgroups - dark green, red and orange, legumes (beans and peas), starchy, and other
- Fruits, especially whole fruits
- Grains, at least half of which are whole grains
- Fat-free or low-fat dairy, including milk, yogurt, cheese and/or fortified soy beverages
- A variety of protein foods, including seafood, lean meats and poultry, eggs, legumes (beans and peas), and nuts, seeds, and soy products
- Oils

A healthy eating pattern limits:

- Saturated fats and *trans* fats, added sugars, and sodium

The following specified limits can help individuals achieve healthy eating patterns within calorie limits:

- Consume less than 10 percent of calories per day from added sugars
- Consume less than 10 percent of calories per day from saturated fats
- Consume less than 2,300 milligrams (mg) per day of sodium
- If alcohol is consumed, it should be consumed in moderation - up to one drink per day for women and two drinks per day for men - and only by adults of legal drinking age.

Documentation Procedure

Each AAA shall be responsible for ensuring that meals planned and served by nutrition service providers meet nutrient content guidance. The nutritional value of menus shall be confirmed either by (1) nutrient analysis software or (2) correspondence with the meal pattern. Either a staff person at the AAA or a consultant dietitian retained by the AAA shall have the expertise to review the menus with their nutrient analyses or meal pattern worksheets, determine if the menus comply with DARS-VDA nutrient content guidance, and work with vendors or menu planners to ensure compliance. Records of all menus implemented and the accompanying nutrition analyses and menu review shall be kept until monitored by DARS-VDA.

Menus posted for client information may simply list in menu fashion the food items to be served for the week or month. For monitoring and evaluation purposes, programs using the meal pattern, option (2) above, shall document menus clearly indicating portion sizes, describing specific components of combination dishes, and explaining which food groups of the meal pattern the menu items are intended to complete. (See Meal Pattern Worksheet) For monitoring purposes, all menus used in the nutrition programs - congregate, home delivered, hot, shelf stable, breakfast, etc. - from all

vendors and/or any self-planned shall be available. Agencies or providers shall have available the A) Meal Pattern Worksheet or B) Nutrient Analysis for each meal/menu.

Menu Planning

The following are recommendations for planning and using menus.

Menus must be:

1. Planned in advance for a minimum of one month. Repetition of entrees shall be kept to a minimum. If a cycle menu is used, there shall be provisions to include seasonal foods.
2. Reviewed for the current Dietary Reference Intakes (DRI) based on the meal pattern or nutrient analysis. (See Menu Review)
3. Posted in a conspicuous location in each congregate meal site so as to be available to participants. It is acceptable to post menus weekly.
4. Posted in each place of food preparation.
5. Adhered to, with the exception that menus are subject to change based on seasonal availability of foods. Menu substitutions shall have prior approval by the AAA; the AAA may provide a pre-approved list of nutritionally equivalent substitutions. (See Specific Nutrient Resources)
6. On file, with the nutrient analyses or meal pattern reviews that document menu nutrient content compliance, and with any menu changes noted in writing for at least one year or according to AAA record retention policy.

Nutrient Analysis

The table that follows represents the most current DRI values for use when planning and evaluating meals. Values are provided for one meal a day for the average older adult population served by the program. For programs serving two meals a day, the values in the compliance range must be doubled, and for three meals per day, the values are tripled.

Menus that are documented as meeting the nutrient requirements through nutrient analysis software must provide the following:

Nutrient	Target Value per meal (1)	Compliance Range (2)
Calories (Kcal)	685	600-750
Protein (grams)	23 gm	Minimum of 14 gm pro in the entrée/protein portion of the meal
Fat (grams)	23 gm	23-27 grams
Vitamin A (ug) (3)	300 ug or 1000 I.U.	> 300 ug or 1000 I.U. averaged over one week
Vitamin C (mg)	30 mg	
Vitamin B6 (mg)	0.57 mg	
Vitamin B12 (ug) (4)	0.79 ug	
Calcium (mg)	400 mg	
Magnesium(mg)	140 mg	>110 mg
Zinc (mg)	3.1 mg	
Sodium (mg)	800 mg	<1,200 mg (5)
Fiber (gm)	10 gm	>8 gm

(1)Target Value: This value represents one-third the Dietary Reference Intake.

(2) Compliance Range: This range represents acceptable minimum or maximum values as specified by the State to allow for menu flexibility and client satisfaction.

(3)Vitamin A content should be from vegetable (carotenoid) sources.

(4)Fortified foods may be used to meet vitamin B12 needs.

(5)Sodium is liberalized based on the information from the Mathematica study that demonstrated that for many participants the meal provides close to 40-50% of the participants daily intake and to allow for menu flexibility and client satisfaction.

Meal Pattern

If nutrient analysis software is not used, each Older Adult Nutrition Program Meal will follow the meal pattern described in this section:

Food Group	MyPlate Amounts per Day (1)	Amount per Older Adult Nutrition Program Meal (2)	Amount for 2 meals/day	Amount for 3 meals/day
Grains /Whole Grains	6 servings, 1 ounce (or slice) each. Half of grains served must be whole grain	2 servings, 1 ounce each. 1 slice of bread=1 ounce. One of the 1 ounce servings must be whole grain	4 servings, 1 ounce each. Two of the 1 ounce servings must be whole grain	6 servings, 1 ounce each. Three of the 1 ounce servings must be whole grain
Vegetables Fruits	2 ½ cups 2 cups	3 servings - ½ cup or equivalent each. Vegetables and fruits together should total a minimum of 1½ cups of vegetables and fruit or equivalent per meal	6 servings- 1/2 cups or equivalent each	9 servings- 1/2 cups or equivalent each
Dairy	3 cups	1 cup	2 cups	3 cups
Protein Foods	5 ½ ounces	2 ounces	4 ounces	6 ounces
Oils	6 tsp	1-2 tsp optional	2-4 tsp optional	4-6 tsp optional
Dessert / Empty Calories		Optional	Optional	Optional

(1)Caloric Value (2,000 Kcal/day) based on a 71+ year old male, less than 30 minutes physical activity/day. The caloric requirement for women 71+, less than 30 minutes physical activity/day, is 1,600 Kcal/day, per USDA ChooseMyPlate.gov

(2)The amount per meal estimates provision of 1/3 of the DRIs.

Note: Use of the meal pattern does not necessarily ensure that meals meet 33 1/3% the DRIs and the *Dietary Guidelines for Americans*. Meals are likely to require specific types of fruits and vegetables, whole grains, and high fiber foods in order to ensure the key nutrients are met. (See Meal Components and Specific Nutrient Sources).

Meal Pattern Summary and Requirements

Requirements for One Meal Daily:

- **2 servings grains - 1 ounce or slice each (1 serving should be a whole grain source)**
- **1½ cup vegetables and/or fruit** (vegetables and fruit together should total a minimum of 1 ½ cups or equivalent/meal)
- **1 cup skim, 1%, or 2% milk**
- **2 oz. edible cooked meat, poultry, fish, dry beans, eggs, or nuts**
- Optional: oils, desserts, and “empty calorie” foods that provide calories and few other beneficial nutrients

Averaging

Each meal provided and counted as an OAA or NSIP meal must stand alone to meet all meal pattern and nutrient requirements without averaging, except if multiple daily meals are provided as described below.

Requirements for Two Meals Daily

1. Congregate and home delivered meal providers serving two meals per day must furnish a total of 66 2/3 percent of the DRIs. Refer to *Meal Components* for additional information.
2. In cases where the provider knows that the participant is receiving 2 meals that together provide 66 2/3 percent of the DRI; each meal may not have to meet 33 1/3 percent. For example, one meal provides 40% of the DRI and the other meal provides 26 2/3%. If the participant receives both meals, requirements will be met. However, if the participant receives only the meal providing 26 2/3% of the DRI, requirements are not met.
3. If it is unknown which meal a participant is receiving, each meal must stand alone to meet the requirements for one meal.

Requirements for Three Meals Daily

1. Congregate and home delivered meal providers serving three meals per day to the same population must provide 100% of the DRIs. Refer to *Meal Components* for additional information.
2. In cases where the provider knows that the participant is receiving 3 meals that together provide 100 percent of the DRI, each meal may not have to meet 33

1/3 percent. For example, one meal provides 40% of the DRI and the other meal provides 26 2/3% and a third provides 33 1/3 %. If the participant receives all meals, requirements will be met. However, if the participant receives various combinations of meals, requirements are not met.

3. If it is unknown which meal combinations a participant is receiving, each meal must stand alone to meet the requirements for one meal.

Breakfast Meal Pattern

When funding allows, agencies may provide breakfast in addition to another meal for the day. The 2 meals together shall meet the meal pattern requirements or the nutrient analysis requirements for 2 meals. Breakfast may not stand alone as the only meal provided for the day.

A Breakfast Meal Pattern such as the following may be helpful in menu planning:

- Grains, 2 servings, 1 oz. each Cereal and Bread/Toast
- Fruit and Vegetable, 1½ cup Juice and Fruit, Vegetable
- Dairy, 1 cup Milk, yogurt, cheese
- Protein, 2 ounces** Egg, peanut butter, breakfast meat
- Oils, optional Margarine

** It is acceptable for the Breakfast Pattern to provide only 1 ounce from the protein group; however, the second meal must provide at least 3 ounces of protein foods (21 grams protein in the entrée) so that the 2 meal/day requirements for a total of 4 ounces of protein foods and other nutrients are met. The nutrient analysis or meal pattern worksheet must document this meal pattern variation.

Meal Components

Grains

What foods are included:

Any food made from wheat, rice, oats, cornmeal, barley or another cereal grain is a grain product. Bread, pasta, oatmeal, breakfast cereals, tortillas, and grits are examples of grain products.

Grains are divided into 2 subgroups, whole grains and refined grains.

Whole grains contain the entire grain kernel -- the bran, germ, and endosperm. Examples include: whole-wheat flour, bulgur (cracked wheat), oatmeal, whole cornmeal, and brown rice.

Refined grains have been milled, a process that removes the bran and germ. Most refined grains are enriched. This means certain B vitamins (thiamin, riboflavin, niacin,

folic acid) and iron are added back after processing. Fiber is not added back to enriched grains. Some examples of refined grain products are: white flour, degermed cornmeal, white bread, and white rice.

What counts as an ounce equivalent:

In general, 1 slice of bread, 1 cup of ready-to-eat cereal, or ½ cup of cooked rice, cooked pasta, or cooked cereal can be considered as 1 ounce equivalent from the grains group.

According to MyPlate, one half of the daily intake should be from **whole grains**. The OANP meals should include foods from whole grain products at least:

- 2 times/week for 1 meal/day
- 4 times/week for 2 meals/day
- 6 times/week for 3 meals/day
- aim for 1 whole grain serving per meal

Include a variety of whole grain, wheat, bran, and rye breads and cereals. If using fortified products, look for items fortified with vitamin B-12 and Vitamin D if available.

In order to provide variety, one slice of bread is also equivalent to:

- One biscuit (2 inch diameter)
- One small muffin (2 ½ inch diameter)
- ½ bagel (1oz)
- Cornbread, (small piece 2 ½” x 1 ¼” x 1 ¼”)
- One tortilla, 6 inch diameter
- Six crackers - saltine type
- ½ cup grits
- ½ cup rice
- ½ cup noodles, macaroni, spaghetti
- ½ cup bread dressing

Limit use of breads that are relatively high in fat such as biscuits, muffins, cornbread, dressings, fried hard tortillas, or high fat crackers.

Vegetables

What foods are included:

Any vegetable or 100% vegetable juice counts as a member of the vegetable group. Vegetables may be raw or cooked; fresh, frozen, canned, or dried/dehydrated; and may be whole, cut-up, or mashed. Canned vegetables are usually high in sodium; low sodium varieties are available but may be higher in cost. If it is necessary to use canned vegetables, they may be rinsed thoroughly to remove up to 40% of the sodium. However, rinsing may also remove other valued nutrients.

Vegetables are organized into 5 subgroups, based on their nutrient content. The five subgroups are: Dark green vegetables, red and orange vegetables, dry beans and peas, starchy vegetables, and other vegetables.

The OANP meals should aim to:

- Include a dark green vegetable at least
 - 2 times a week for 1 meal/day
 - 4 times a week for 2 or 3 meals/day
- Include an orange vegetable or fruit at least
 - 2 times a week for 1 meal/day
 - 4 times a week for 2 or 3 meals/day
- Include dried beans and peas at least
 - 2 times/week for 1 meal/day
 - 4 times/week for 2 or 3 meals/day
- Include starchy vegetables (white potatoes, sweet potatoes, yams, corn, green peas, and green lima beans) no more than $\frac{1}{2}$ cup per meal for most meals.

What counts as a cup:

In general, 1 cup of raw or cooked vegetables or vegetable juice, or 2 cups of raw leafy greens can be considered as 1 cup from the vegetable group.

- A total of $\frac{1}{2}$ cup vegetables as an ingredient in soups, stews, casseroles or other combination dishes is equivalent to $\frac{1}{2}$ cup vegetables.
- Lettuce and tomato served as condiments are not a vegetable serving. One cup of lettuce or leafy greens and $\frac{1}{2}$ cup tomato are each equivalent to $\frac{1}{2}$ cup vegetables.
- Used as a vegetable, $\frac{1}{2}$ cup of a legume dish is equivalent to $\frac{1}{2}$ cup vegetables.
- A total of $\frac{1}{2}$ cup vegetables in molded salads can count as $\frac{1}{2}$ cup vegetable (approximate $\frac{3}{4}$ cup molded salad).
- Potatoes count as a vegetable serving. If using instant or dehydrated potatoes (higher in sodium), choose a brand enriched with vitamin C.
- Tossed salads may count as a Vitamin C source if they contain at least $\frac{1}{2}$ cup greens and $\frac{1}{4}$ cup Vitamin C rich items such as peppers, cabbage, or tomatoes. The darker the greens, the greater the content of Vitamin C and Vitamin A. Pale green lettuce is low in nutrient content.

Fruit

What foods are included:

Any fruit or 100% fruit juice counts as part of the fruit group. Fruits may be fresh, canned, frozen, or dried, and may be whole, cut-up, or pureed. Canned fruit must be packed in juice, water, or light syrup.

What counts as a cup of fruit:

In general, 1 cup of fruit or 100% fruit juice, or ½ cup of dried fruit can be considered as 1 cup from the fruit group. A small piece of fresh fruit such as a small apple, banana, orange, or peach can be considered ½ cup fruit. A total of ½ cup fruit in molded salads counts as ½ cup fruit (approximate ¾ cup molded salad).

In the OANP meals, limit fruit juices. Offer mostly whole or cut-up fruit—canned, frozen, fresh, or dried rather than juice, for the benefits that the dietary fiber provides.

Dairy

What is included in the dairy group:

All fluid milk products and many foods made from milk are considered part of this food group. Foods made from milk that retain their calcium content are part of the group, while foods made from milk that have little to no calcium, such as cream cheese, cream, and butter, are not. Calcium-fortified soymilk (soy beverage) is also part of the dairy group

Most dairy group choices should be fat-free or low-fat (use skim or 1% milk).

What counts as a cup:

In general, the following are considered 1 cup from the dairy group:

- 1 cup (8 oz.) of fortified skim, 1 %, 2% (higher in fat), low fat chocolate milk or buttermilk (higher in sodium), lactose-reduced milk, lactose-free milk
- ½ cup (4 oz.) evaporated milk
- 1 cup (8 oz.) yogurt (note that most yogurt containers are only 4-6 oz. and would represent ½ - ¾ of a serving)
- 1/3 cup non-fat dry milk powder
- 1 ½ ounces hard cheese (cheddar, mozzarella, Swiss, parmesan)
- 1/3 cup shredded cheese
- 2 ounces processed cheese (American) (higher in sodium)
- ½ cup ricotta cheese
- 2 cups cottage cheese (higher in sodium)
- 1 cup pudding made with milk (higher in sugar)
- 1 cup frozen yogurt (higher in sugar)
- 1 ½ cups ice cream (higher in sugar and fat)

For senior participants who avoid milk because of lactose intolerance, the most reliable way to get the health benefits of dairy products is to include lactose-free alternatives within the Dairy Group, such as cheese, yogurt, lactose-free milk, or calcium-fortified soymilk (soy beverage) or to take the enzyme lactase before consuming milk.

Calcium choices for those who do not consume dairy products include: Specific juices, cereals, breads, rice milk, and almond milk that are calcium-fortified. Canned fish (sardines and salmon with bones), soybeans and other soy products (tofu made with calcium sulfate, soy yogurt, tempeh), some other beans, and some leafy greens (collard and turnip greens, kale, bok choy). The amount of calcium in these foods varies and may not be well absorbed.

Protein Foods (meat, poultry, fish, dry beans, eggs, and nuts)

What is included in the protein foods group:

All foods made from meat, poultry, fish, dry beans and peas, eggs, processed soy products, nuts, and seeds are considered part of this group. Dry beans and peas are part of this group as well as the vegetable group. Most meat and poultry choices should be lean or low-fat.

What counts as an ounce equivalent in the protein foods group:

- 1 ounce of meat, poultry, or fish, **excluding** skin, bone, breading, or liquid
- ¼ cup cooked dry beans or peas
- 1 egg
- 1 tablespoon of peanut butter
- ½ ounce of nuts or seeds
- ¼ cup tuna
- ¼ cup (about 2 ounces) of tofu
- 1oz. tempeh, cooked
- ¼ cup roasted soybeans
- 2 tablespoons hummus

The meal shall contain a 2 to 3-ounce equivalent edible portion of cooked meat, poultry, fish, eggs, or beans that furnishes **at least 14 grams of protein from the entrée** for each meal. Breakfast meals must contain at least 1-ounce equivalent from the meat / protein group. If only 1 ounce from the protein foods group is supplied at breakfast, a second meal must supply at least 3 ounces from the protein foods group (21 grams protein in the entrée) so that together the 2 meals furnish at least 4-ounce equivalents of protein foods per day.

Remember that meat portions lose weight in cooking so allow for shrinkage in determining the edible portion. Take into account that inedible parts such as bone and skin do not count as part of the 2 to 3 ounce portion. Fillings or breading used in preparation do not count as part of the 2 to 3 ounce portion.

Limit use of high sodium meats (e.g., hot dogs, sausage, bacon, ham, cold cuts, etc.) to no more than:

- 1 time per month when serving 1 meal per day
- 2 times per month when serving 2 or 3 meals per day

If high sodium meats are served more than once per month for variety and client satisfaction, then low sodium versions should be used when available and documented on the menu.

Food Safety Reminder: Deli meats, hot dogs, and sausage shall be heated to steaming hot prior to serving.

- Serve legume dishes (using mature dried beans and peas and lentils, such as lima, kidney, navy, black, pinto or garbanzo beans, lentils, black eyed peas and soybeans) as often as possible in accordance with participant acceptance.
- If they are not counted as a vegetable, a total of ¼ cup mature dried beans and peas and lentils as an ingredient in soups, stews, casseroles or other combination dishes is equal to one ounce equivalent of meat.
- Fish, nuts, and seeds contain healthy oils, so these foods are good choices occasionally instead of meat or poultry, according to participant acceptance.
- Ground meat such as ground beef or ground turkey may be served no more than
 - 2 times per week when serving 1 meal/day
 - 4 times per week when serving 2 or 3 meals/day
 - this does not include formed meat products or shredded meats
- Texturized Vegetable Protein (TVP) may be incorporated in recipes with a maximum ratio of 30% TVP to 70% meat.

Protein Food Equivalents for Casseroles and Mixed Dishes

Casserole entrée items that combine meat, a grain such as rice or pasta, vegetables, cooked dried beans, cheese, or creamed sauce are cost effective. However, it can be difficult to achieve the 2 to 3 ounce meat or bean requirement unless the recipe is adjusted accordingly to include more protein ingredients.

When documenting protein food equivalents on the Meal Pattern Worksheets, casseroles and mixed dishes must be broken down into their component parts and shown under the appropriate food group by appropriate portion sizes. If accurate portions are not shown, it is possible the menu will be non-compliant with the nutrient content guidance.

The protein requirement can also be met by supplementing the meal with other protein-rich foods such as:

- Add chopped or sliced egg to a salad
- Add a cold salad made with dried beans
- Add split pea or lentil soup
- Add sliced or grated cheese to garden salads (milk group)(higher in sodium)

- Add a side dish of cottage cheese with fruit (milk group)(higher in sodium)

Portion amounts of these items should be carefully delineated when the Meal Pattern Worksheet is the method for demonstrating nutrient content compliance of the menus.

When purchasing prepared, institutional size frozen entrees or prepared frozen meals, look carefully at the sodium content. Select products and recipes that are lower in sodium and fat.

Oils

What is included:

Oils are fats that are liquid at room temperature, like the vegetable oils used in cooking. Oils come from many different plants and from fish. Some common oils are: canola oil, corn oil, cottonseed oil, olive oil, safflower oil, soybean oil, and sunflower oil.

Oils are not a requirement, but they provide essential nutrients and therefore are often included in menu planning. Each meal may contain oils to increase the palatability and acceptability of the meal. Oil equivalents may be used in food preparation or served as an accompaniment to the meal.

Use 1-2 of the following per meal:

- 1 ½ teaspoon fortified, soft, trans-fat free margarine
- 1 ½ teaspoon margarine spread
- 1 ½ teaspoon mayonnaise or mayo-type salad dressing
- 1 tablespoon salad dressing
- 1 tablespoon light cream cheese

Pay particular notice to portion sizes and individual-serving packets of salad dressings when planning and analyzing the menu. Be aware that dressing packets may contain 1.5 to 2 ounces of dressing and equal 3 to 4 tablespoons or more of dressing, which may be 2, 3, or 4 times the oil allotment allowed.

It is acceptable to use low fat/fat free butter flavored products. Lard may not be used. Limit fats and oils high in saturated and/or *trans*-fatty acids, and when selecting and preparing meat, poultry, dry beans, and milk or milk products, make choices that are lean, low-fat, or fat-free.

Gravy and sauces may be an essential component in maintaining temperatures of prepared foods. Gravy and sauces also make it easier for older people to chew and swallow foods. Use recipes and choose mixes for gravy and sauces that are lower in fat and sodium.

Dessert/Empty Calories

Dessert may be provided as an option to satisfy the caloric requirements or for additional nutrients. Use of fruits, whole grains, or dairy equivalents as desserts and foods not excessive in fat and sugar are encouraged.

- Fruit or fruit based desserts can add important nutrients to the meal. When a dessert such as a fruit crisp contains $\frac{1}{2}$ cup of fruit, it may be counted as a $\frac{1}{2}$ cup of fruit equivalent.
- When a dessert contains the equivalent of 1 serving grains per serving, it may be counted as part of the grain equivalents (example bread pudding, rice pudding, cookies made with whole grain flour).
- To increase the fiber content, oats and whole grain or bran cereals are recommended as toppings on fruit, yogurt, or pudding desserts.
- Include desserts that are good sources of calcium such as low- or non-fat frozen dairy desserts, custards, puddings and other recipes made from low- or non-fat milk. When a dessert contains the equivalent of $\frac{1}{2}$ cup milk per serving, it may be counted as $\frac{1}{2}$ cup of dairy.
- Baked products made with whole grains such as oatmeal, and that include other wholesome ingredients such as raisins, applesauce, bananas, or peanut butter, should replace desserts providing calories from sugar and fat but little else.

When foods such as chips, cookies, and crackers that provide mostly calories and few other required nutrients are included, these will be considered empty calorie foods. Such empty calorie foods may be considered on rare occasions if the meal otherwise meets all nutrient requirements, additional calories are needed, and their inclusion does not exceed the compliance range for calories.

Condiments and Product Substitutes

Mayonnaise, ketchup, mustard, salad dressing, tartar sauce, margarine, and fat-free butter flavorings may be provided as appropriate to the particular menu. The oil and sodium content of the condiments should be considered in menu planning. If using high sodium condiments such as ketchup, barbeque and teriyaki sauce, prepared mustard, seasoned salts, bouillon, pickles and olives, balance the menu with low sodium choices. Low sodium condiments, if available and acceptable, are encouraged.

Pepper, herbal seasonings such as Mrs. Dash, lemon, vinegar, and non-dairy coffee creamer may be provided, but shall not be counted as fulfilling any part of the nutrient requirements.

Nutrition providers are not encouraged to provide salt, sugar, salt substitutes, and sugar substitutes because they may not be appropriate for all participants. However, it is known that meal participants are independent adults with the right and ability to

make choices. Therefore, providers are encouraged to develop, implement, and share with meal participants a policy addressing whether or not the provider will make these items available. The policy may include permitting participants to bring these items for their own use.

Menu Review

Each AAA is responsible for having either a staff person or a Registered Dietitian (RD) or individual of comparable background with the expertise to review the menus and their nutrient analyses or meal pattern worksheets and determine if the menus comply with DARS-VDA nutrient content guidance. The menus and nutrient analyses must be determined to be in compliance prior to implementation. The RD or staff person must work with vendors or menu planners to ensure compliance. The fact that a credentialed RD plans meals used by a school, hospital, or nursing home does not necessarily mean that the meals meet the meal planning guidelines and the nutrition requirements for the OANP. The RD must use these DARS-VDA menu planning guidelines as the basis for his/her review of the menus.

In addition to verifying nutrient content and/or correspondence to the meal pattern, the RD must be reviewing other aspects of the menu, such as variety of food, serving sizes, color, texture, consistency, and use of seasonal and ethnic foods. Menu review includes recommending changes to address errors and discouraging the use of extra items that add to food costs.

Menus are also reviewed in light of the available food preparation facilities and equipment, which may affect food combinations and methods of preparation. AAA central kitchen or food preparation vendor staff should work closely with the RD on menu and recipe preparation issues.

Nutrient Analysis Software

Computer analysis is recommended because it will provide more specific information about the nutrient content of the menus than a meal pattern and may assist in controlling food costs. Meal patterns should continue to be used as a planning tool to ensure food plate coverage and requirements as per the Dietary Guidelines for Americans; however, use of computerized nutrient analysis will help determine the nutritional adequacy of meals.

Nutrition directors must be aware that nutrient analysis is not the end in itself, but a tool to be used to plan meals that meet the DRI's and furnish targeted nutrients. The AAA holds the ultimate responsibility to ensure that nutrient analyses are reviewed and that nutrient requirements are met. If the nutrient analyses do not demonstrate that the meals comply with nutrient requirements, it is the AAA nutrition director's responsibility to work with the service provider, vendor, or RD to re-plan and readjust

the menus in order that nutrient requirements are met before the menus are implemented.

The AAA has some discretion to allow flexibility in planning meals that may not meet the meal pattern as long as they meet the nutrient value requirements as demonstrated by computerized nutrient analysis. Fortified food products and combination dishes used in a menu may not match the meal pattern but may provide for the required nutrient values. For example, a fortified snack bar as a dessert could be used to boost the nutrient value of a boxed lunch or special occasion meal.

AAAs are encouraged to include computerized nutrient analysis of menus as a part of their requests for proposals/bids and contracts with nutrition service providers, vendors, or RDs.

Following are some of the commonly used nutrient analysis software programs and links to their websites:

ESHA Food Processor - <http://www.esha.com/foodprosql>

Nutritionist Pro - Axya Systems <http://www.axya.com/>

FoodWorks - <http://www.nutritionco.com/FoodWorks.htm>

Shelf Stable Meals

Shelf stable meals shall be made available when feasible and appropriate, usually for emergency or other situations when it is not possible to serve or deliver a perishable meal. The shelf stable meals should be replenished, so the expiration date does not pass.

To the extent possible, shelf stable meals must follow the meal guidelines. However, shelf stable meals may be high in sodium and lacking in quality vegetables and protein foods, as well as several key nutrients. It is difficult to provide the quality and quantity of protein foods and the variety of vegetables required by the DGAs in shelf stable form and at a reasonable cost. For this reason, shelf stable meals are not appropriate for ongoing use in the OANP.

When they are used for emergency purposes, a shelf stable meal pattern such as the following may be helpful:

- Entrée or meat
- Vegetable
- Fruit
- Grain
- Juice
- Dry Milk

Emergency Shelf Stable Meals Sample Menus

#1:	Chili with Beans Carrots Mixed Fruit Pudding Cup Orange Juice Non-fat Dry Milk	#2:	Canned Chicken, 2 oz Corn Mixed Fruit Whole Grain Crackers Apple Juice Non-fat Dry Milk
#3:	Tuna, 2 oz Sweet Peas Applesauce Whole Grain Crackers Fruit Juice Non-fat Dry Milk	#4:	Beef Stew Green Beans Raisins Nutri-grain Bar Apple Juice Non-fat Dry Milk

Packaging Requirements:

- A multi-pack shall include menus to instruct participants how to combine the foods to meet the meal requirements.
- Cans are to be easy to open, with pull tabs whenever possible.
- The box must be clearly labeled with the expiration date or “best if used by____(date)”.

Frozen Meals

Programs purchasing prepared and packaged frozen meals must follow the same meal planning guidelines. Vendors must provide nutrient analyses of their meals. A staff person at the AAA or the AAA’s consultant dietitian shall have the expertise to review the nutrient analyses and verify compliance with DARS-VDA nutrient content guidance, and work with the vendor as needed to achieve compliance. The AAA must keep the verification that menus meet the nutrient content guidance on file with the menus. Menus planned using prepared frozen meals should show the dates particular frozen meals are served/delivered and be reviewed for repetition of entrees and other aspects. (See Menu Review)

Modified Meals

Meals served according to the meal pattern are suitable for persons with diabetes, heart disease, and hypertension.

AAAs shall establish procedures that allow nutrition service providers to furnish modified meals where feasible, appropriate, and cost effective to meet the particular dietary needs that arise from religious or ethnic background or for health needs of the participants. Meals for participants who require therapeutic diets may be offered only

when the modified meal can be obtained from a facility where a registered dietitian approves the meals.

Ethnic and Cultural Meals

Many OANP providers want to expand food choices and respect cultural preferences. However, perceived obstacles include increased costs and compliance with Dietary Reference Intakes (DRIs). Limited funding, decreasing resources, a diminishing volunteer pool, and lack of transportation also challenge Nutrition Programs. These often overshadow desires to increase menu choices. Program administrators need to weigh the benefits and drawbacks of offering more culturally representative menu choices and may consider the following strategies:

- If a program provides only one entrée daily, the cycle menu may offer entrees that are multicultural. Such changes will not increase food costs to any significant degree.
- If a program offers a choice of side dishes to reflect the ethnicity of the community, such changes will not affect food cost significantly.
- If a program hasn't been offering a monthly "ethnic or culture" theme, it may begin to do so. Build it into nutrition education plans. Collaboration with participants and their community representatives will go a long way in establishing good rapport.
- Use an ethnic caterer or restaurant to serve specific ethnic and/or religious communities. The restaurant or caterer may follow a meal pattern provided by the nutrition provider and the caterer develops the actual menu based on the known preferences of the group.
- Hispanic, Asian, African-American, and other ethnic restaurants and caterers can provide meals at costs comparable to other establishments, particularly if individuals in the community assist in negotiations.
- To comply with the DRIs when incorporating new foods, follow a meal pattern first and know the main ingredients and nutrient content of the food. A number of nutrient databases contain foods of other regions and cultures. Commercial food purveyors may be able to provide nutrition information about their products. Compliance with the DRIs may be challenging, but it is not an "excuse" to avoid menu variety.

Liquid Nutrition Supplements

Definitions

Medical food, The term medical food, as defined in section 5(b) of the Orphan Drug Act (21 U.S.C. 360ee (b) (3)) is "a food which is formulated to be consumed or administered enterally under the supervision of a physician and which is intended for the specific dietary management of a disease or condition for which distinctive

nutritional requirements, based on recognized scientific principles, are established by medical evaluation."

Medical foods are known by a variety of names, such as nutrition supplements, "liquid meals," and oral supplements. However, the most appropriate statutory term is medical food.

Liquid nutrition supplements (LNS), is the term that will be used for the purpose of this document and will be understood to include **medical food** as defined above.

Also, for the purpose of this document, LNS are commercial preparations such as Ensure or Boost that are provided to participants who need additional sources of nutrition and/or who cannot tolerate regular solid food.

Requirements

The intent of the OAA and the Nutrition Services Incentive Program (NSIP) is to provide "food first." The OAA allows Title III funds to be used to purchase liquid supplements. Liquid supplements may be served in addition to a meal that meets the OAA nutrition requirements, that meal plus the liquid nutrition supplement would count as one meal.

Liquid nutrition supplements when served alone cannot be counted or reported to the Administration for Community Living (ACL) as meals. They do not meet the current DGA requirements, are not defined as food, and therefore do not meet the requirements to be counted as a meal for the OAA or NSIP.

Eligibility

Recipients of LNS must meet all eligibility criteria for Title III Nutrition Services, either home delivered or congregate nutrition. Recipients of LNS shall be given the opportunity to contribute a voluntary, confidential, and private donation. LNS shall be provided only under the following circumstances:

- When in consultation with a registered dietitian, physician, or other qualified health professional it has been determined appropriate.
- A written doctor's order is required and the older individual's medical status must be reviewed at least annually for ongoing medical need of the LNS.
- The older individual is malnourished, at risk of malnutrition, or has disease related special nutritional needs as determined by a registered dietitian, physician, or other qualified health professional.
- The older individual has anatomical, physiological, or mental problems and cannot meet his or her nutritional needs by eating a nutritionally balanced diet of solid or texture modified foods as determined by a registered dietitian, physician, or other qualified health professional.

Exclusions

The following are NOT considered LNS and shall NOT be provided using OAA, NSIP, and general funds:

- Single or multiple vitamin and/or mineral supplements in tablets, capsules, liquids, or any form, whether prescription or over-the-counter. Examples include “One-A-Day,” “Geritol,” vitamin B-6, iron supplement, etc.
- Liquid supplement products which are used for weight loss have reduced calories and/or fat. Examples include “SlimFast,” “Ensure light,” etc.
- Herbal remedies, teas, medicinal oils, laxatives, fiber supplements, etc.

Specific Nutrient Sources

Nutrient content amounts are approximate

Source: USDA National Nutrient Database for Standard Reference, Release 28

<http://www.nal.usda.gov/fnic/foodcomp/search/>

Vitamin A target - 300 ug/meal

Rich sources (>300 ug in ½ cup)

Sweet potato
Pumpkin
Carrots
Spinach

Kale
Mixed vegetables
Greens, turnip and collard

Fair Sources (120-300 ug in ½ cup)

Greens, beet and mustard
Cantaloupe
Mandarin Oranges
Canned Apricots

Winter squash (hubbard, butternut)
Cooked Chinese cabbage
Red sweet pepper

Vitamin C target - 30 mg/meal

Rich sources (>30 mg in ½ cup)

Kiwi fruit
Raw orange
Strawberries
Brussels sprouts
Cantaloupe

Red and green sweet peppers
Orange and grapefruit juice
Tomato and vegetable juice
Kohlrabi
Broccoli

Fair Sources (20-30 mg in ½ cup)

Cauliflower
Kale

Beet, mustard, and turnip greens
Cabbage, coleslaw

Pineapple
Baked potato with skin

Mango

Vitamin B6 target - 0.57 mg/meal

Good sources

Fish-cod, haddock, tuna
Beef, pork
Baked potato, with skin
Ready to eat cereals (fortified)
Banana

Chicken, turkey
Garbanzo beans
Rice
Prunes, prune juice

Vitamin B12 target - 0.79 ug/meal

Lean meat, poultry, fish
Milk, cheese, yogurt
Eggs
Ready to eat cereals (fortified)

Calcium target - 400 mg/meal

Milk: skim, 1%, 2%, buttermilk, chocolate, whole	~280 mg/8 oz.
Yogurt	~275 mg/8 oz.
Cheese: Romano, Swiss, provolone, mozzarella, cheddar, muenster, bleu, feta	~300 mg/1.5 oz.
Processed cheeses	~300 mg/ 2 oz.
Ricotta cheese	~300 mg/ ½ cup

Non-dairy sources of Calcium

Fortified, ready to eat cereals: varies, check labeling - 236-1043 mg/1 oz.

Greens, cooked:

Collards 178 mg/ ½ cup
Turnip greens 124 mg/ ½ cup
Beet greens, bok choy 80 mg/ ½ cup
Spinach 146 mg/ ½ cup
Kale 90 mg/ ½ cup

Beans, cooked:

Green soybeans 130 mg/ ½ cup
White beans 96 mg/ ½ cup
Cowpeas 106 mg/ ½ cup
Mature soybeans 88 mg/ ½ cup

Magnesium - target 140 mg/meal

Good sources (> 80 mg/ serving)

Halibut
Spinach
Brazil Nuts
All Bran

Fair sources (> 40 mg/ serving)

Fish: pollock, haddock, flounder, tuna,
Beans: white beans, green soybeans, black beans, chickpeas, navy, Lima, pinto
Nuts: peanuts, Brazil nuts, almonds, cashew
Brown rice
Couscous
Vegetables: okra, baked potato with skin, artichokes
Raisin Bran

Zinc - target 3.1 mg/meal

Lean beef ~5 mg/ 3 oz.
Lean pork ~2 mg/ 3 oz.
Poultry ~1.3 mg/ 3 oz.
Fish ~0.5-0.8 mg/ 3 oz.
Oysters ~75 mg/ 3 oz.
Yogurt 1.68 mg/8 oz.
Split peas, black beans ~1.0 mg/ ½ cup
Fortified, ready to eat cereals: varies, check labeling - up to 15 mg/1 cup

Fiber - target 8-10 gm/meal

Very Good Sources: More than 3 grams fiber/serving

Grains: Barley, bulgur wheat, couscous, All-Bran, shredded wheat cereals

Vegetables: Mature beans (navy, kidney, split peas, lentils, black beans, pinto, lima, white, chickpeas, great northern, cowpeas, soybeans), baked and sweet potato with skin, pumpkin, spinach, cooked greens, artichokes, Brussels sprouts, sauerkraut

Fruits: Dried prunes, dates, figs (3 each), frozen raspberries, blackberries, raw apples and pears with skin

Peanuts (1/4 cup)

Good Sources: 2 to 3 grams fiber

Grains: Brown rice, oatmeal, whole wheat spaghetti, whole wheat bread, Cheerios, Raisin Bran

Vegetables: Sweet potatoes, winter squash, cabbage, broccoli, mixed vegetables

Fruit: Frozen blueberries, strawberries, and peaches, raw orange, banana, canned

apricots and pears

Nuts: 1 oz. (almonds, Brazil, hazelnuts or filberts, macadamia, mixed, pecans, peanuts, pistachios)

Food Preparation Guidelines

1. Prepare most foods without adding salt. To flavor foods, use herbs and spices, salt-free seasonings, lemon juice, lime juice or vinegar.
2. When using high sodium condiments such as ketchup, barbeque and teriyaki sauce, prepared mustard, seasoned salts, bouillon, pickles and olives, balance the menu with low sodium choices. The sodium content of the condiments should be considered in menu planning. Low sodium condiments are strongly encouraged.
3. Light soy sauce should be used to replace regular soy sauce and used infrequently. Monosodium glutamate (MSG) should not be used in food preparation.
4. When feasible, select low sodium versions of canned soups, tomatoes, vegetables, and salad dressings in place of regular canned/bottled items.
5. Use low-fat cooking methods such as baking, broiling or steaming. Do not add fat to cooked meats or vegetables.
6. Use all types of fish, lean cuts of meat, and poultry without skin.
7. Substitute beans, peas, and lentils for some meat. For example, modify recipes to include well-cooked lentils along with meat in pasta sauce or use whole-wheat flour as a thickener or extender in some dishes.
8. Prepare low sodium, low fat soup and gravy stocks rather than purchase. Make sauces and gravies without fat. Add starch to cold liquid, instead of blending starch with fat, before cooking for thickeners.
9. Offer fruit desserts: fruit cup, fruit crisp, fruit cobbler, fruited gelatin (containing ½ cup fruit)
10. Select low fat, low sodium cheese when feasible.
11. Substitute vegetable oils (ex. canola oil) for shortening, soft margarine for butter. Lard should not be used.
12. Refer to Nutrition Service Providers Guide for many additional food preparation and menu planning tips.

http://nutritionandaging.fiu.edu/DRI_and_DGs/nutrition_service_providers_guide.asp

Meal Pattern Worksheets

The following pages are worksheets to be used by AAA programs using the meal pattern option of menu planning for the purpose of documenting that the menus conform to the meal pattern and comply with food and nutrient content guidance.

Instructions: Enter menu items for each meal in first column. In the columns under each food group, list in detail the menu items and portion amounts intended to complete required meal pattern components. Combination and mixed dishes should be broken down and represented under appropriate food group headings. Measurements appropriate to the food item should be used. For example, bread should be represented in slices, fruit and vegetables in cups, fresh fruit in pieces, cereal and pastas in cups, etc. (See Sample Worksheet)

In order to meet nutrient requirements, all food groups and targeted amounts must be correctly represented. If all food groups are not represented with menu items of correct portion sizes, the menus will be considered non-compliant. The AAA Nutrition Director is responsible for ensuring that menus are compliant before they are implemented.

Duplicate as many Meal Pattern Worksheets and adjust spacing as needed to evaluate all meals and keep on file with menus for monitoring purposes.

Meal Pattern Worksheet

Instructions: Enter menu items for each meal in first column. In the columns under each food group, list in detail the menu items and portion amounts intended to complete required meal pattern components. (See Sample Worksheet) In order to meet nutrient requirements, if all food groups and targeted amounts are not correctly represented, the menu must be adjusted before it is implemented. Duplicate as many Meal Pattern Worksheets and adjust spacing as needed to evaluate all meals. Keep on file with menus for monitoring purposes.

FOOD GROUP	GRAINS	VEGETABLES AND FRUIT	DAIRY FOODS	PROTEIN FOODS	OILS/DESSERTS/ EMPTY CALORIE FOODS
Required Amounts	2 servings (1 oz equivalent each) 1 slice bread = 1 oz	1 ½ cups	1 cup	2 to 3 oz	1 to 2 tsp oils optional

Meal Pattern Worksheet Sample

FOOD GROUP	GRAINS	VEGETABLES AND FRUIT	DAIRY FOODS	PROTEIN FOODS	OILS/DESSERTS/ EMPTY CALORIE FOODS
Required Amounts	2 servings (1 oz equivalent each) 1 slice bread = 1 oz	1 ½ cups	1 cup	2 to 3 oz	1 to 2 tsp oils optional
MENU DAY 1 Roast Turkey, Baked Sweet Potato, Broccoli, Whole Wheat Roll/Marg, Apple Raisin Crisp, Fat-Free Milk	1 small whole wheat dinner roll ½ cup oatmeal topping on crisp	½ cup sweet potato ½ cup broccoli ½ cup apples and raisins in crisp	1 cup fat-free skim milk	2 oz turkey	1 tsp soft margarine
MENU DAY 2 Latin Roasted Pork, Cuban Style Black Beans, Rice, Garden Salad-Italian Dressing, Strawberries, Whole Grain Bread/Marg, Fat-Free Milk	½ cup brown, whole grain rice 1 slice whole grain bread	1 cup salad greens (equals ½ cup veg equivalent) ½ cup black beans ½ cup strawberries	1 cup fat-free skim milk	2 oz pork	1 Tbsp Italian dressing 1 tsp soft margarine
Sample Shelf Stable Breakfast Menu Raisin Bran, Unsalted Rye Crackers, Sliced Peaches Orange Juice Non-Fat Dry Milk, Peanut Butter	1 cup Raisin Bran Six unsalted rye crackers	No vegetable (All of fruit and vegetable requirement is provided by fruit and juice for this meal) 1/2 cup peaches 1 cup 100% orange juice	1/3 cup nonfat dry milk powder (reconstitute to 1 cup)	1 Tbsp Peanut butter = one oz equivalent (lunch provides 3 oz meat to equal 4 oz provided by the 2 meals/day)	
Sample Shelf Stable Meal Spaghetti with Beef (7.5 oz canned entrée) Green Beans, Mixed Fruit, Graham Crackers Apple Juice, Non-Fat Dry Milk	½ cup spaghetti in canned entrée 3 graham cracker squares	¼ cup tomato sauce in canned entrée ½ cup green beans ½ cup mixed fruit ½ cup apple juice	1/3 cup nonfat dry milk Powder (reconstitute to 1 cup)	2 oz. beef in canned entrée	

